METHOD FOR DETERMINING ZONES IN A STRATIFIED MEDIUM WHERE THE INTERFACE BETWEEN A FLUID IN PLACE IN THE MEDIUM AND A FLUSHING FLUID MOVES IN A STATIONARY MANNER

ABSTRACT

The invention relates to a method for determining the zones of a stratified porous medium whose physical properties are known, wherein the front or interface between fluids in place and injected flushing fluids moves in a stationary manner, without using a complete flow simulation. Starting from an *a priori* defined front form which separates two zones of uniform saturation, assumed to have a stationary displacement, the pressure field is determined independently in each zone. The pressure jump on either side of the front is then evaluated for any point of the interface. If it is zero, the form of the front is such that it can move in a stationary manner in the medium. If the pressure jump is not zero, the user deforms the interface and resumes the process until a stationary form is obtained. This process may not converge. In this case, we consider that a stationary front cannot form through the total thickness of the medium and the medium is divided so as to seek solutions in intermediate zones.